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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/573,351	01/16/2007	Steven Tanzi	118989-06032851	8780
20583	7590	04/10/2008		
JONES DAY 222 EAST 41ST ST NEW YORK, NY 10017			EXAMINER CUTLIFF, YATE KAI RENE	
			ART UNIT	PAPER NUMBER
			1621	
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			04/10/2008	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/573,351	Applicant(s) TANZI ET AL.	
	Examiner YATE K. CUTLIFF	Art Unit 1621	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 March 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-27 is/are pending in the application.
- 4a) Of the above claim(s) 25-27 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>3/24/2006</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Information Disclosure Statement

1. The listing of references in the specification is not a proper information disclosure statement. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609.04(a) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." Therefore, unless the references have been cited by the examiner on form PTO-892, they have not been considered.

Specification

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

The following title is suggested: A Process for the Separation of Alkyl Branched Fatty Acids from a Fatty Acid Mixture.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.

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2. Ascertaining the differences between the prior art and the claims at issue.
 3. Resolving the level of ordinary skill in the pertinent art.
 4. Considering objective evidence present in the application indicating obviousness or nonobviousness.
5. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).
6. Claims 1-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Unichema Chemie BV (EP 0415697 A2) (Unichema), Koehler et al. (US 5,917,097) and Perkins et al. (Analysis of Fats, Oils and Derivatives, 1993).
7. The rejected claims cover, inter alia, a process for the separation of alkyl branched C12 to C24 fatty acids from a fatty acid mixture comprising linear and alkyl branched C12 to C24 fatty acids comprises; (i) **optionally** hydrogenating the fatty acid mixture, (ii) cooling the mixture to form crystals, and (iii) separating the alkyl branched C12 to C24 fatty acids from the mixture by dry fractionation. Rejected claims 2-14 disclose the various ranges of C12 to C24 in the fatty acid mixture including the ranges of alkyl branched to linear fatty acids, and saturated to unsaturated fatty acids. Rejected claims 15 and 16 disclose the properties of the alkyl branched fatty acids. Rejected claims 17-24 disclose product information, and additional reaction conditions.

Unichema teaches a process for separating a mixture of branched fatty acids. (see page 2, line s 53-55 & page 3 lines 1-2). In Example 1 of Unichema, an isostearic acid (C18) and urea are dissolved in methanol by warmed to 68 °C, once dissolved the mixture was cooled to room temperature or below where crystals were formed. The crystals were separated by filtration. The crystals were purified by distillation and a fatty acid fraction was obtained. Table 1 on page 4 discloses that 63.7% of a C18 branched fatty acid was obtained. Further, Table 1 indicates that the starting material contains C16 acids and Palmitic acid (a C16 linear fatty acid).

Unichema fails to disclose the use of a hydrogenating process; the cooling temperature; the fatty acid mixture containing C12, C14, C20 and C22 fatty acids; the filtration process as dry fractionation; the properties of the alkyl branched fatty acid; and the properties of the crystal end products.

Koehler et al. discloses process that subjects fatty acids to fractional crystallization to obtain a fraction of unsaturated fatty acids, C12 to C18, using a cooling temperature of around 5°C. (see column 4, lines 12-31). Koehler discloses that hydrogenating is used on the fraction from the crystallization process that is predominantly unsaturated fatty acids to form the corresponding fatty alcohols. (see column 2, lines 51-55). Further, the fatty alcohols may be purified by a second fractional crystallization. (see column 5, lines 16-17).

Perkins disclosed the major acid components of fats of aquatic origin which contain mixtures of fatty acids that include C14 to C22. (see Table 1.5) Also, Perkins

discloses the major acid components for some vegetable fats which contain mixtures of fatty acids that include C12 to C22. (see Table 1.4).

With regard to the properties of the alkyl branched fatty acid starting material, this appears to be well within the purview of an ordinary artisan. Especially, since the crystallization process is used to achieve one of the following objectives: a) to eliminate small quantities of high-melting compounds from an oil so it remains clear at low ambient temperature (i.e. winterization); and b) to obtain oil/fat fractions with particular temperatures for phase changes (e.g., solid to liquid, liquid to solid). One skilled in the art would be motivated to elect an alkyl branched fatty acid with the properties need to obtain the best fat or oil for their desired use.

With regard to the properties of the crystal products, this appears to be well within the purview of the ordinary artisan, since the selection of the starting mixture can aid in steering the crystallization process in the desired direction to produce fats with different properties.

Furthermore, during patent examination, the pending claims must be "given their broadest reasonable interpretation consistent with the specification." In re Hyatt, 211 F.3d 1367, 1372, 54 USPQ2d 1664, 1667 (Fed. Cir. 2000). Claim terms are presumed to have the ordinary and customary meanings attributed to them by those of ordinary skill in the art. Sunrace Roots Enter. Co. v. SRAM Corp., 336 F.3d 1298, 1302, 67 USPQ2d 1438, 1441 (Fed. Cir. 2003); Brookhill-Wilk 1, LLC v. Intuitive Surgical, Inc., 334 F.3d 1294, 1298 67 USPQ2d 1132, 1136 (Fed. Cir. 2003). In claim 1, the term "optionally" is an indication that step (i) is a process step which may

or may not be part of the separation process. Therefore, claim 1 can be interpreted to read on the process where separation is conducted by cooling a mixture of fatty acids and then separation by dry fractionation.

Lastly, The prior art reference of Unichema discloses a process for separating a mixture of linear and alkyl branched fatty acid; and Koehler discloses a process for separating mixtures of linear and branched fatty acids (fatty alcohols). Both references teach cooling the mixture of fatty acids to produce crystals. Koehler teaches the use of hydrogenation after a first crystallization step process verses hydrogenation prior to the crystallization step (Applicant's step (i)). The selection of any order of performing process steps is *prima facie* obvious in the absence of new or unexpected results; In re Gibson, 39 F2d 975, 5 USPQ 230 (CCPA 1930)

It would have been obvious to one having ordinary skill in the art to choose any one of the processes taught by Unichema or Koehler with the predictable result to separate linear and alkyl branched C12 to C24 fatty acids.

Therefore, the invention as a whole was *prima facie* obvious to one of ordinary skill in the art at the time the invention was made, as evidenced by the references, especially in the absence of evidence to the contrary.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to YATE K. CUTLIFF whose telephone number is (571)272-9067. The examiner can normally be reached on M-TH 8:30 a.m. - 5:00 p.m.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Yvonne Eyler can be reached on (571) 272 - 0871. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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